

### Abstract of the Disclosure

The present invention relates to a CMOS active pixel sensor which includes a compensation circuit capable of compensating a lowered pixel voltage output due to leakage current of a photodiode. The CMOS active pixel sensor having a light sensing unit for generating an output voltage when light is incident thereupon, the sensing unit having an amount of leakage current before the incidence of light. A reset unit resets the output voltage of the light sensing unit to an initial reset voltage in response to a reset signal. A sense transistor has a source, a drain coupled to a power source voltage, and a gate coupled to the output of the light sensing unit. A select transistor has a drain connected to a source of the sense transistor, and provides the voltage of the sense transistor to a bit line, in response to a select signal. A compensation unit supplies a voltage corresponding to the output voltage of the light sensing unit lowered by the leakage current.